

Review Article

Effectiveness of Midwife-Led Care Models in Improving Maternal Outcomes: A Systematic Review

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A B S T R A C T

Midwife-led care models are increasingly recognized as an effective approach to improve maternal outcomes and enhance quality of care during pregnancy, childbirth, and postpartum. This systematic review aims to evaluate the effectiveness of midwife-led care models in improving maternal health outcomes, including reductions in maternal morbidity and mortality, increased satisfaction, and improved birth experiences. A comprehensive literature search was conducted across PubMed, Scopus, Web of Science, CINAHL, and Google Scholar for studies published between 2010 and 2024. Twenty-eight studies met inclusion criteria, encompassing randomized controlled trials, observational studies, and systematic reviews. Evidence indicates that midwife-led care improves maternal outcomes through continuous antenatal support, skilled birth attendance, reduced interventions during labor, timely identification of complications, and comprehensive postnatal follow-up. Despite positive outcomes, challenges such as workforce shortages, limited resources, and sociocultural barriers were identified. Strengthening midwife-led care, integrating midwives into healthcare systems, and expanding education and training programs are essential for improving maternal health globally.

Keywords: Midwife-Led Care, Maternal Outcomes, Skilled Birth Attendance, Antenatal Care, Postnatal Care, Systematic Review

Introduction

Maternal health remains a global priority, with an estimated 287,000 women dying annually from pregnancy- or childbirth-related complications, most of which are preventable (WHO, 2019). Despite advances in healthcare, maternal morbidity and mortality remain disproportionately high in low- and middle-income countries. Leading causes of maternal deaths include postpartum hemorrhage, hypertensive disorders, infections, and obstructed labor. Ensuring access to skilled care throughout pregnancy and childbirth is critical for improving maternal survival.¹

Midwife-led care models are designed to provide continuous, woman-centered care across the antenatal, intrapartum, and postnatal periods. These models prioritize continuity of care, respect for women's preferences, and empowerment through education and support. Evidence suggests that midwife-led care not only reduces maternal and neonatal morbidity but also improves maternal satisfaction, birth experiences, and psychosocial outcomes.²

Global health organizations, including the World Health Organization (WHO) and United Nations Population Fund (UNFPA), emphasize the integration of midwife-led

models into healthcare systems to achieve Sustainable Development Goal 3.1, which targets a maternal mortality ratio of less than 70 per 100,000 live births by 2030. Despite growing evidence of their effectiveness, the adoption and implementation of midwife-led care remain inconsistent, particularly in resource-limited settings.

This systematic review aims to evaluate the effectiveness of midwife-led care models in improving maternal outcomes, identify key components of successful care, and explore barriers and challenges that may limit their impact.³

Methodology

This systematic review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to ensure transparency and reproducibility (Moher et al., 2009). A comprehensive literature search was performed across PubMed, Scopus, Web of Science, CINAHL, and Google Scholar for studies published from 2010 to 2024. Search terms included “midwife-led care,” “midwifery model,” “maternal outcomes,” “antenatal care,” “skilled birth attendance,” and “postnatal care,” combined with Boolean operators (AND, OR).⁴

Inclusion Criteria:

- Peer-reviewed studies evaluating midwife-led care models.
- Studies reporting maternal outcomes, including morbidity, mortality, intervention rates, and satisfaction.
- Quantitative, qualitative, and mixed-method studies.
- Studies published in English between 2010 and 2024.

Exclusion Criteria:

- Studies focusing exclusively on neonatal outcomes without maternal data.
- Editorials, commentaries, conference abstracts, or opinion papers.
- Duplicate publications or studies lacking methodological rigor.

All retrieved records were imported into reference management software (Mendeley), and duplicates were removed. Titles and abstracts were screened for relevance, followed by full-text assessment against inclusion criteria. Data extraction captured study design, country, sample size, type of midwife-led model, maternal outcomes, and key findings.⁵

The methodological quality of included studies was assessed using the Critical Appraisal Skills Programme (CASP) checklist for qualitative studies and the Joanna Briggs Institute (JBI) tools for quantitative studies. Due to variability in study design and outcome measures, findings were synthesized narratively, organized under themes such

as antenatal care, intrapartum care, postnatal care, and overall maternal outcomes.⁶

Results

The initial database search yielded 410 articles. After removing duplicates and screening titles and abstracts, 82 full-text articles were assessed, and 28 studies met the inclusion criteria for the review. These studies represented diverse settings, including high-, middle-, and low-income countries. Study designs included randomized controlled trials (n=10), cohort studies (n=8), cross-sectional studies (n=5), and systematic reviews (n=5).

Antenatal Care

Midwife-led care significantly improved antenatal outcomes by providing continuous monitoring, health education, and psychosocial support. Women receiving midwife-led antenatal care were more likely to attend regular check-ups, adhere to recommended interventions, and recognize warning signs early, leading to timely referral and management of complications such as pre-eclampsia, anemia, and infections. Studies in low-resource settings demonstrated that community-based midwife programs increased antenatal coverage by 20–35%, which was associated with improved maternal outcomes.⁷

Intrapartum Care

Skilled birth attendance by midwives was associated with reduced rates of labor interventions, including cesarean sections, instrumental deliveries, and episiotomies. Midwife-led care models emphasized continuous labor support, individualized birth plans, and respectful care, which improved maternal satisfaction and reduced stress during childbirth. Evidence from Cochrane reviews indicates that midwife-led continuity of care is linked to lower rates of preterm birth and fewer medical interventions compared to physician-led or shared models of care.

Postnatal Care

Midwife-led postnatal care facilitated early detection of postpartum complications such as hemorrhage, infections, and depression. Postnatal follow-up also improved breastfeeding practices, maternal mental health, and adherence to family planning. Community-based midwife programs in rural regions improved postpartum care utilization and reduced maternal morbidity by providing home visits and health education.⁸

Overall Maternal Outcomes

Collectively, the evidence indicates that midwife-led care models improve maternal health outcomes, including reduced maternal mortality and morbidity, increased satisfaction, and improved psychosocial well-being. Countries with well-integrated midwife-led services

reported lower maternal mortality ratios and higher rates of facility-based deliveries. Midwife-led models were particularly effective in low- and middle-income countries, where access to skilled obstetricians is limited.

Discussion

This systematic review demonstrates that midwife-led care models are effective in improving maternal outcomes across diverse healthcare settings. Continuous care from midwives, encompassing antenatal, intrapartum, and postnatal periods, is associated with improved detection and management of complications, reduced unnecessary interventions, and enhanced maternal satisfaction. Midwives provide holistic care that addresses clinical, emotional, and educational needs, which contributes to positive birth experiences and maternal empowerment.

Evidence from Cochrane reviews and international studies supports the integration of midwife-led care into healthcare systems as a cost-effective strategy to improve maternal health outcomes. WHO and UNFPA emphasize midwife-led models as a critical component of strategies to reduce maternal mortality and achieve Sustainable Development Goal 3.1. Midwife-led continuity models have been shown to reduce preterm births, lower rates of obstetric interventions, and increase maternal satisfaction compared to other care models.

Community-based midwife programs were particularly effective in rural and underserved areas, improving maternal health awareness, encouraging facility-based deliveries, and strengthening referral networks. Midwives serve as a bridge between communities and healthcare facilities, ensuring timely interventions and continuity of care.

Despite their benefits, several challenges limit the effectiveness of midwife-led care. Workforce shortages, particularly in low-resource regions, reduce access to skilled care and increase workloads for existing midwives. Inadequate training and limited professional development opportunities compromise the quality of care. Infrastructure deficits, including insufficient equipment, medications, and referral networks, hinder effective service delivery. Sociocultural barriers, such as gender norms, traditional practices, and limited awareness, further restrict the utilization of midwife-led services.⁹

Addressing these challenges requires policy-level interventions, including increased investment in midwifery education, professional recognition, supportive supervision, and integration of midwives into healthcare systems. Strengthening midwife-led care models can significantly reduce maternal morbidity and mortality and improve maternal satisfaction globally.

Challenges and Barriers

Several factors hinder the implementation and effectiveness of midwife-led care models. Workforce shortages are a major barrier, particularly in rural and underserved areas, leading to increased workloads and decreased quality of care. Limited access to standardized training and continuing education affects the competence and confidence of midwives. Infrastructural constraints, including lack of essential medications, equipment, and referral systems, impede timely management of obstetric emergencies. Sociocultural factors, including traditional beliefs, gender inequality, and low awareness of maternal health services, reduce utilization of midwife-led care. Additionally, midwives often face limited recognition and decision-making authority in physician-dominated health systems. Overcoming these barriers requires investment in education, supportive policies, integration into healthcare systems, and community engagement to maximize the impact of midwife-led care on maternal outcomes.

Conclusion

This systematic review demonstrates that midwife-led care models are effective in improving maternal outcomes, reducing interventions during labor, preventing maternal morbidity, and enhancing maternal satisfaction. Continuous care across the antenatal, intrapartum, and postnatal periods, combined with community-based support, contributes to timely detection of complications and improved maternal health. Integrating midwife-led models into national healthcare systems, expanding workforce capacity, and strengthening training programs are essential strategies for improving maternal outcomes globally. Addressing workforce shortages, infrastructural gaps, and sociocultural barriers will further enhance the effectiveness of midwife-led care. Overall, midwife-led care models are a critical intervention for reducing maternal morbidity and mortality and promoting high-quality, woman-centered maternity care.

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